

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



Fall 1929 . . Spring 1930

California's Choicest

BULBS

LIBRARY

RECEIVED

OCT 31 1929

U. S. Department of Agriculture

62.09

ERYTHRONIUMS

see page 17

CARL PURDY

UKIAH, CALIFORNIA

Terms, Cash With Order

Safe Carriage Guaranteed

I guarantee that all bulbs shall reach my customers safely, and that they shall be of good quality. If bulbs are lost in transit, or are not good, I will either replace them or refund the money, at my option.

Claims for Damage

Claims for damage must be made immediately on receipt of the bulbs or plants.

Quality of Bulbs

My bulbs are of superior quality, and it is my aim to sell only the best.

Date of Shipment

All California bulbs should be planted either in fall or early winter if the best results are desired. Very few can be kept in good condition later than January 1. I will not fill orders for Erythroniums later than December 1, and after January 1, I can supply only Lilies.

Expressage, Postage or Freight Free

In every instance I deliver all goods free of carriage charges within the United States. Under the postal regulations, I can ship 11 pounds by post to Great Britain, Germany, Holland and some other countries. I can pack any order in parcels within these weights, and will, in every case, prepay postage and guarantee safe delivery. The post is both cheaper and more rapid for foreign shipments.

Prices

Quotations are for one and per dozen. Six will be sent at dozen rates.

If Varieties Are All Sold

Unless forbidden in your order, I reserve the right to send you equally good sorts and better value than you asked for, when a stock is exhausted.

INDEX

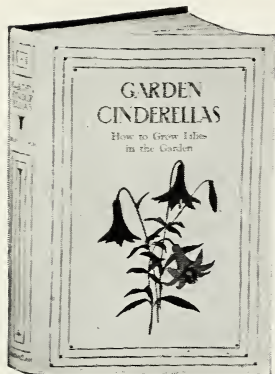
	PAGE		PAGE
Allium	6	Hardiness of Western Plants.....	1, 2
Brodiaea	6, 7	Lady's Slippers, Western.....	26, 27
Butterfly Tulips	10-14	Larkspur	27
California Lilies	19-24	Leopard Bog Lilies.....	22, 23
Calochortus	9-14	Lewisia	27, 28
Camassia	8, 9	Lilies, Californian	19-24
Cat's Ears	10	Lilies Other Than Californian.....	24, 25
Cypripedium	26, 27	Mariposa Tulips	10-13
Delphinium	27	Star Tulips	10
Dog's-Tooth Violets	15-19	Trilliums	25, 26
Erythroniums	15-19	Wild Flower Seeds.....	3, 4
Fritillarias	14, 15	Zygadenus	26
Globe Tulips	9		

GARDEN CINDERELLAS

How to Grow Lilies in the Garden

By HELEN M. FOX

Foreword by E. H. Wilson, keeper of the Arnold Arboretum



Here at last is a book that I can heartily recommend in every respect. No one interested in Lilies, either professional or amateur, can afford to be without it, and it is such good reading that it should be on the shelf of every flower lover.

The descriptions are complete and accurate to the last detail, yet so simple that they can be easily followed by the novice.

The cultural directions, propagation methods, and general notes are the result of years of personal experience of the author in growing Lilies in her own garden and from collaboration with recognized authorities.

269 pages, 4 color plates, 29 halftones, 18 line drawings, 6 x 8¾; cloth binding.

I will send this book postpaid anywhere in the United States for \$5.

CYCLOPEDIA OF HORTICULTURE

By L. H. BAILEY

A vast work covering most thoroughly every phase of horticulture. Lists practically all plant life known in America, with full information as to culture, hardiness, etc. This is the first book anyone interested in plants should buy. New edition in three volumes. \$25 the set, postpaid.

The Hardiness of Western Plants and Bulbs in the East and Far North

It may be said, generally, that all of our Western plants winter better when the winter is consistently cold. As a rule, injury, if any, is from being exposed to thaws when foliage is tender. They will winter better in Montreal or Vermont than in New Jersey.

Calochortus. The Globe Tulips, like *albus*, and the Star Tulips (pages 9, 10) are hardier than the Mariposa Tulips, and will almost always winter with a light covering of leaves. They are quite hardy throughout the East, and North to Maine and Montreal. Letters from many points show this. As, for instance, from Poughkeepsie, New York, that these had done well in rockwork, flowering year after year; from New Brunswick—"I never saw anything like *Calochortus amabilis* to bloom;" from Ithaca, New York—"Amabilis does well in this climate;" from Ohio—"Amabilis bloomed for six weeks with me and is most satisfactory;" and many others.

With the Mariposa Tulips success is not uniform. In coldframes there is no trouble whatever, while in the open some people succeed and others do not.

A recent letter from New York State tells of great success with *Calochortus venustus El Dorado* in the open there, and I have had many such reports.

This shows that it is not a matter of temperature that causes failures with these beautiful flowers but some other condition such as a period of hard freeze and thaw in the spring after their leaves appear.

The hardiest of these are *Venustus oculatus*, *citrinus*, *Vesta*, *Leichtlinii*, and other high mountain sorts.

Mr. Correvon writes from Switzerland. "Some *Calochortus* froze last winter—the coldest in a very long period of time—while the greater part of them are flowering now."

Brodiaeas are perfectly hardy throughout the East. The following report from Western Massachusetts should sufficiently attest that point: "They sent up their leaves early; through solid ice, in fact. I expected them to bloom in May at the latest, and when they did not I thought they were a failure and forgot about them. They turned out a complete success and were very satisfactory."

Or, from Ithaca, New York: "*Brodiaea laza* flowered beautifully and lasted a very long time. Every one admired it."

Or a report from Northern Maryland where *Brodiaeas* self-seeded and naturalized.

Brodiaeas adapt themselves to soils much better than *Calochortus*, yet best success will be had where drainage is sharp and the situation is sunny. Rock gardens are especially fitted to their needs.

Camassias are perfectly hardy anywhere in the East and do well year after year. They like moist soil and sun and may be smothered by grass, although strong growers. They should not only do well but get better and self-sow.

Dodecatheons are included in this bulb list as the spider-like roots can be handled perfectly dry. I do not believe that *Clevelandii* is hardy in the East, but have reason to think that *Hendersonii* is. I do not carry the former, but can supply the latter.

Fritillarias. From Milwaukee comes a report that *Recurva* has flowered in the open a third season. *Lanceolata* is perfectly hardy. *Pudica* grows in regions where winters are very cold but it must have a very light, open soil. A report from near Boston, for last winter, is that all sorts wintered there well.

Erythroniums. From place after place there are uniform reports of both the hardiness of and the success with these lovely things. Colonies in Minneapolis, near Detroit, just out of Boston, in Delaware, and elsewhere have been successful and maintained themselves year after year. They are woodland plants and should have light shade at least, but with us they are found in almost any but marshy soils, and I have seen fine colonies of *Revolutum* where water ran over the beds for months.

Failures with *Erythroniums* are apt to be from two causes: First, the bulbs when dug dry out rather easily, unless kept in a cool place and in barely moist packing. Then, too, some of the longer bulbs are brittle and break easily in setting. Still, I find that both ends grow.

Western Lilies are all hardy at any point in the East, but it must be emphasized that Lilies are not of the easiest culture, or rather that at no place can we be assured of success with all or even a few. This remark is just as true of Japanese and European Lilies. Some sorts are very easily grown in one place and are a failure with more skillful growers a few miles away, and with no traceable cause. But, as a rule, the person who will study their needs can succeed with a goodly number of species.

Of the Western species, any fairly careful gardener following directions should grow the following species well: *Lilium Humboldtii*, *Humboldtii magnificum*, *Bloomerianum*, *Columbianum*, *Pardalinum*, *Roezlii*. The first variety is as easily grown as the others but takes at least a year to become established and to flower, while the second and third always flower well the first season.

Lilium Washingtonianum purpureum, *Kelloggii* and *Rubescens* are not quite so easy, yet most excellent reports come from the East and Northwest as to the first, and *Kelloggii* is still better. *Rubescens*, too, can be grown well with care.

From Long Island comes word that both *Lilium Washingtonianum purpureum* and *Lilium Parryi* are perfectly at home in the woods.

Lilium Parryi is a glorious Lily and can be grown without too much care, but the essentials of a soil rich with mold, yet sweet and well-drained, with always moisture close to the top, must be given.

The three small-flowered Bog Lilies are very hardy but not too easily grown unless directions are closely followed.

Lewisiads are perfectly hardy in the East. From Montreal comes the word—"I have grown *Howellii*, *Tweedii*, and *Cotyledon* for years, successfully. All that they ask is full sun and perfect drainage."

Western Lady's-Slippers are hardy and can be grown under such conditions as the Eastern sorts demand.

TO THOSE WHO WOULD VISIT MY GARDENS

My gardens are nine miles from Ukiah, part of the distance over a steep mountain grade, but a road that will give no concern to anyone used to mountain roads. Visitors are always welcome, but it is requested that you telephone before leaving Ukiah, so that someone will be on hand to attend you.

HOW TO GROW WILD FLOWERS

Nature gives the lesson, but one must be sure that he reads Nature's lessons aright. Naturally all of these seeds germinate on this Coast with the first fair fall rains. They make a winter growth slowly, develop and flower in the spring and die down in summer, although with a little more moisture, some, as for instance, *Godetias*, will flower well through the summer.

The *Eschscholtzia* is a strong perennial treated as an annual.

If one stopped here one would think that the only thing necessary would be to sow in the fall and let them go.

But there is now an element to be met that is not of Nature. Since the white occupation a large number of weeds and coarse grasses have come in and the native flowers cannot stand their competition. A *Godetia*, for instance, has little show in a dense growth of *Alfilleria*, or Burr Clover or Broncho Grass, all of which are foreigners. The *Godetia* would be completely choked out.

To meet this unnatural condition it is necessary either to wet the ground enough in early fall to germinate the seeds of all weeds and grasses and then to plow, spade or even break the surface lightly with hoe or mattock enough to kill the young seedlings.

Then mix the wild flower seeds thoroughly in a considerable quantity of fine dirt or sand so as to be able to sow widely and evenly. Do not sow each sort by itself, but mix sorts flowering in succession. See season numbers before each sort.

For instance, a mixture of *Nemophila*, *Gilia*, *Clarkia*, *Godetia* and *Bartonia* would give a succession from first to last of the season. *Nemophila*, *Gilia*, *Eschscholtzia* and *Lupine* would make another combination, and so on.

The seed once sown needs no care. It will grow well and flower in season and resow itself most liberally. Indeed, too liberally. Flowers do not do as well crowded.

Also, seeds of the weeds and coarse grasses will come in again, and the very best effects are to be had by breaking and resowing every fall. If it is not done there will be many wild flowers for years but gradually the coarse growth will choke them out. There is far more danger of having them too thick than too thin. Eight inches apart is an abundance. If too thick, a rake can be run through to kill many and still leave an abundance.

Summer fallowing of the area is a fine preparation. One can have acres of wild flowers with scarcely any trouble.

SEEDS OF WILD FLOWERS

In California there are an immense number of wild flowers, both annual and perennial. The latter are not well suited for naturalizing as they very seldom bloom the first year.

Very many of these lovely flowers do not take so kindly to culture as to insure success in any way. I think that if a census were taken of the opinions of those who had sowed many sorts they would say that by far the larger number produced nothing, but if one will study Nature this is not necessarily true. I think it best to offer a small list of species almost certain to thrive and flower. Luckily, too, it numbers most of those which make the great mass flowering here.

For open places, in sun or light shade, *Clarkias*, *Collinsia*, *Eucharidiums*, *Godetias*, *Nemophilas*.

For sun, fair soils, and moderate spring moisture, same with *Bartonia aurea*, *Eschscholtzias*, *Gilias*, *Linum Lewisii*, *Calandrina speciosa*.

For very hot sandy or gravelly places, *Bartonia aurea*, *Mentzelias*, *Abronias*, *Argemones*.

There are several well-known garden flowers which do admirably under the same treatment, and I offer seeds as follows:

SHIRLEY Poppies. Finest mixed. Oz., 50 cts.

ARGEMONE *Platyceras*, 2-3 feet, hispid, with large white poppy-like flowers. Oz., \$1.

BARTONIA *Aurea* has sticky leaves and cup-shaped flowers of delicious yellow filled with golden stamens. Oz., \$1.

CALANDRINA Speciosa is a trailer like **Portulaca**, with showy red flowers. Oz., 75 cts.

CLARKIAS are among California's finest annuals.

Elegans, soft rose. Oz., 40 cts.

Pulchella, rose red. Oz., 40 cts.

COLLINSIA bicolor has racemes of many handsome rose and white flowers. Oz., 50 cts.

Grandiflora, dwarf blue. Pkt., 15 cts.

ESCHSCHOLTZIA Californica is the rich reddish orange sort. Oz., 50 cts.

Cæspitosa, dwarf early golden yellow. Desirable in flower border. Pkt., 15 cts.

Maritimum, yellow at outer edge, pale at center. Oz., 50 cts.

Tenuifolium, pale yellow dwarf. Pkt., 15 cts.

EMMANANTHES Penduliflora, a dainty plant with greenish drooping bells. Oz., 75 cts.

EUCHARIDIUM Concinnum (**Clarkia Concinnum**) is a most delightful low-growing sort with deep red flowers. Oz., \$1.

GLIA Achillaefolia, 8-12 inches, bright lavender-blue flowers in small heads. Oz., 30 cts.

Capitata, heads of light blue flowers; branching habit. Oz., 30 cts.

Tricolor, low plants, with charming flowers, like **Phlox Drummondii**, in three colors. Oz., 50 cts.

Liniflora, white, very graceful. Oz., 50 cts.

GODETIA Amoena, 12-15 inches, branching, large bell-shaped flowers of soft rose. Oz., 50 cts.

IBERIS Gibraltarica, a most charming perennial with lavender flowers. Pkt., 25 cts.

LINUM LEWISII, a lovely blue Flax. Oz., 60 cts.

LAYIA Elegans, 6 inches, with dainty yellow daisies like tiny **Coreopsis**. Pkt., 15 cts.

NEMOPHILA Insignis, blue; a most charming low bedding plant. Oz., 50 cts.

Maculata, white with vivid purple spots. Oz., 40 cts.

NIGELLA Miss Jekyll, blue flower surrounded by a filmy mass of greenish sepals. Pkt., 15 cts.

PHACELIA Congesta, branching plants, 12 inches high, with many close heads of blue bells. Pkt., 15 cts.

Campanulata, same, but loose heads of deep blue. Pkt., 15 cts.

Tanacetifolia, similar to last but light blue and taller. Pkt., 15 cts.

Packets 10 cts. each unless otherwise stated.

Montreal, Canada: "All of the *Erythroniums* and most of the *Calochortus* came through winter with only a covering of leaves."

Newcastle, Pa.: "Erythroniums did well with only a protection of leaves."

Tarrytown, N. Y.—*Lewisia oppositifolia* came well through the winter and was covered with starry white blossoms like small *Water Lilies*. Very beautiful.

A famous authority writes in June, 1926: "The *Lewisias* (planted in a cool greenhouse) are still in heavy bloom here, each species lasting over two weeks, and *Lewisia Rediviva* the latest to bloom. One plant each of *Lewisia Cotyledon* and *Lewisia Howellii* have lived outdoors through two winters and are in heavy bloom. Those with large or colored flowers are as showy, and no more difficult to grow, as the most rare of the *Alpines* of Europe."

Many other reports from New York, Massachusetts, and other Eastern points corroborate this note.

There is no doubt but the finest of the *Lewisias* can be grown in the East given proper soil and treatment, and they are exceedingly worth the trouble to achieve success.



Calochortus Albus, or the Fairy Lantern (see page 9)

CALIFORNIAN BULBS

ALLIUM

ALLIUM Unifolium grows from 6 to 10 inches high, with a good sized umbel of bright rose-pink flowers. A really handsome plant that luxuriates in any good loamy soil in sun or light shade. 6 cts. each, 60 cts. per doz. Hardy anywhere.

Validum has a persistent, thick, rather fibrous root, has many broad lanceolate leaves at the base, and makes a good-sized clump in time, a foot to 2 feet high with quite showy rose flowers. It loves moisture. 30 cts. each, \$3 per doz.

BRODIAEAS

These plants have a small bulb producing grassy leaves near the ground, and very slender, but stiff, naked stems bearing a head of waxy flowers of great lasting quality. All are pretty. They grow exactly like *Calochorti*, and their culture is the same and just as easy as for that flower. In California they are easily naturalized in almost any soil. Plant them about 2 inches deep, with a trowel or dibble, and leave them alone. They are especially happy under oak or other deciduous trees, in crevices in rocks, or in rough, gritty soils. **Brodiaeas can be shipped from September to January 1.**

Reports from many Eastern points indicate that *Brodiaeas* are perfectly hardy. Mr. Stephen Hamblin of Harvard Botanic Gardens lists *Capitata*, *Lactea*, and *Laza* as being absolutely hardy and long-lived. As these do not differ in habits from a number of others I would extend his remark to include all.

The Floral Firecracker, **Coccinea**, has stems rising to 2 feet, while the flowers are a vivid crimson tipped with pea-green. The resemblance to a bunch of firecrackers catches the eye at once. A group of these bulbs in a mass of ferns or light-foliaged plants is striking, and they do very well potted. They prefer a loose soil, and preferably gritty. Large bulbs will cost you 7 cts. each, 70 cts. per doz., while giant bulbs are worth 12 cts. each, \$1 per doz.

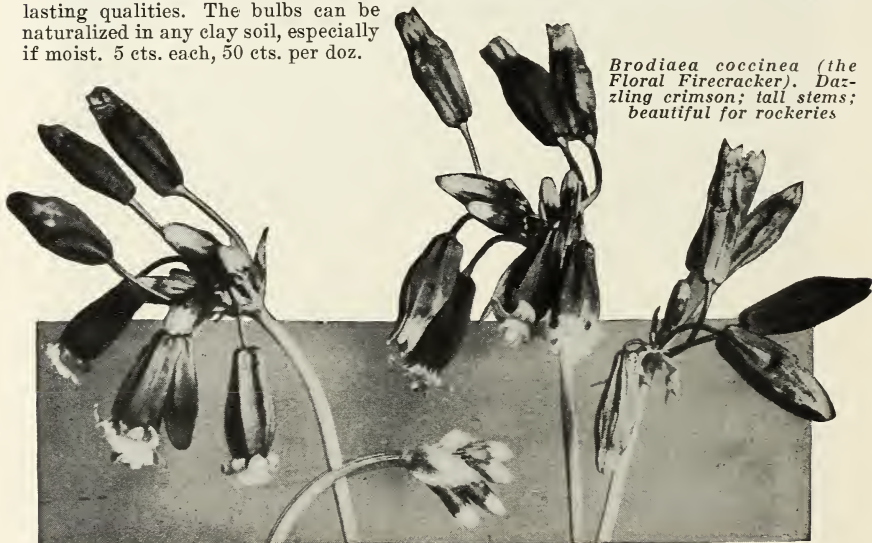
Californica is like a giant **grandiflora** with rose-tinted flowers. Exceptionally beautiful and lasting. 6 cts. each, 60 cts. per doz.

There are several species of *Brodiaea* called California Hyacinths, and a good one is *Capitata*. The stem is slender, capped with a head of violet-blue flowers. They revel in hot, dry places among rocks or in grit, and flower very early. 4 cts. each, 30 cts. per doz.

Crocea has light yellow flowers in umbels. 5 cts. each, 50 cts. per doz.

Grandiflora has a few large, glossy, purple flowers of much beauty and great lasting qualities. The bulbs can be naturalized in any clay soil, especially if moist. 5 cts. each, 50 cts. per doz.

Brodiaea coccinea (the Floral Firecracker). Dazzling crimson; tall stems; beautiful for rockeries



Hendersonii bears many flowers in an umbel. The ground-color is light yellow with a deep purple band down the center of each petal. 7 cts. each, 70 cts. per doz.

Ixioides, called **Golden Star**, has an umbel like *Hendersonii*, but with flowers of a fine golden yellow on stems 6 to 8 inches high. 5 cts. each, 50 cts. per doz.

Laxa is known as **Blue Milla**, and has a many-flowered umbel of fine blue flowers. It is one of the best for naturalizing. Very fine bulbs. 6 cts. each, 60 cts. per doz.

Lactea has close umbels of milky white flowers. 5 cts. each, 50 cts. per doz.

Multiflora has a large head of many violet-colored flowers on a stout, tall stem. 5 cts. each, 50 cts. per doz.

Purdyi alone has flatly spreading flowers with recurved tips; reddish lilac and rather like *stellaris*. 6 cts. each, 60 cts. per doz.

Stellaris is low growing with starry blue flowers with contrasting white centers. 6 cts. each, 60 cts. per doz.

Volubilis is the most interesting of all. The flowering stem climbs on any support as shown in cut below. Flowers in a fine cluster, soft pink and very lasting. 10 cts. each, \$1 per doz.

Mixed Brodiaeas, 40 cts. per doz., \$3 per 100.

Brodiaea Collection. 100 bulbs, 5 varieties, my selection, \$3.50; 50 bulbs, \$2.

The culture of *Brodiaeas* in the East is as for *Calochortus*, and they are about as hardy. They all do well in pots. *Brodiaeas* are fine cut-flowers and wonderfully lasting.



1—*Brodiaea Hendersonii*

2—*Capitata*

3—*Laxa*

4—*Volubilis*

Sow wild flowers in bare places.

(See page 3.)

BRODIAEAS. I feel that these lovely and easily grown bulbs should be more planted and appreciated. Pictures do not do justice to them, but they are very charming, very easy, and as cut-flowers, wonderfully lasting.



Camassia Leichtlinii

From a Cleveland, Ohio, Amateur: "The Camassias made a sturdy growth, more than 4½ feet in height, covered with bloom and lasting longer than almost any plant (bulbous) that I know of. I made the mistake of planting them solitary. In future will make large groups."

CAMASSIAS

Whether on the Pacific Coast, in the East, or in Europe, there are few bulbous plants which meet climatic or soil conditions better, or give a more attractive bloom. They are hardy without protection, and thrive either under ordinary garden conditions or when naturalized in open moist woods, or on the sides of ponds or streams, or in not too dense a grassy growth. In the West they thrive where they are submerged all winter. All Eastern and European customers praise them highly. It is better to plant them not over 4 inches apart in masses of from twelve to hundreds. Plant from October to January in any fair soil, and 3 to 4 inches deep. Water liberally when growing and in flower, but it does not matter whether they are dried off afterward or not. The foliage is excellent. Not necessary to lift when done flowering. They can be left alone for years.

Leichtlinii comes in two colors. In deep blue, it is a fine plant that may grow to 4 feet in height, with as many as a hundred flowers, of the finest, even form, star-shaped, and as large as an inch and a half across. It flowers in long succession. These at 8 cts. each, 80 cts. per doz., or \$6 per 100. In cream-color, *Leichtlinii* is as large as in blue, but with the different colored flowers. It, too, is a very fine plant. When well established, *Camassias* reminds one of the *Eremuri*. 8 cts. each, 80 cts. per doz., or \$6 per 100.

Reports from delighted customers in all sections of the United States justify me in emphasizing both the hardiness and beauty of *Camassias*. On account of their height, a picture fails to do justice to the flowers.

Camassia quamash is the right name for the species I have long listed as **Esculenta**. *Esculenta* is a plant of the Mississippi Valley. *Quamash* is a purple form. Rich in color, and grows as high as 2 feet in the best soils. Showy in masses. A wonderful value at my prices. 5 cts. each, 50 cts. per doz., \$3 per 100; flowering bulbs to natural-size, \$15 per 1000, not delivered.

Camassias are ready from September to January 1. Best planted in late September and early October.



Calochortus Maweanus (white), dainty and beautiful, 4 to 10 inches high; *Benthamii*, yellow; *Lilacinus*, lilac; *Purdyi*, white and much larger than others. Dainty plant for shaded nooks or rockwork in little colonies

CALOCHORTUS

These are lovely bulbous plants, which are best described under the separate groups. See page 1 as to hardiness in the East.

Section I. GLOBE TULIPS

Words convey only a faint idea of these flowers. Their form is similar, but there is a great difference in color. All are exquisite in tints and the perfection of grace in form. The plants are rather tall and slender, with leaf-wrapped stems of odd shape. They are natives of woodlands, delighting in loose soils and liking leaf-mold and light shades. At the same time, most of them will do well in heavy soils, and are fine subjects to naturalize among rocks or in shaded woods. In the East, as well as the West, they succeed very well if given the care suggested in cultural directions.

Globe Tulips are very satisfactory for pot-plants, and a colony of six to twelve makes a most beautiful mass of color.

Albus, Fairy Lantern. White. 5 cts. each, 50 cts. per doz., \$3.50 per 100.

Amabilis. Rich yellow. 5 cts. each, 50 cts. per doz., \$3.50 per 100.

Amœnus. Like *Albus*, but a soft rose-pink; simply exquisite. 10 cts. each, \$1 per doz.

Section II. STAR TULIPS; CAT'S-EARS

Slender woodland plants well shown in picture above. Fine for naturalization in rockwork and woodland.

Benthamii, bright yellow; **Maweanus major**, white; these at 5 cts. each, 50 cts. per doz. **Maweanus roseus** is another form with flowers delicately tinted pink. 5 cts. each, 50 cts. per doz.

Lilacinus is low growing with clear lilac flowers of much beauty. Not hairy inside. 5 cts. each, 50 cts. per doz. All above at \$3.50 per 100.

100 Globe and Star Tulips (25 bulbs each of 4 varieties, my selection) for \$3.50, 1/2 collection, \$2.

Delivery September 1 to January 1 only.

Friends of mine in Wisconsin, to whom I sent *albus* and *amabilis*, were delighted with the blooms.



Mariposa Tulips of the El Dorado strain. (For color picture of these Mariposa Tulips, see page 13)

Section III. TRUE MARIPOSA, or BUTTERFLY TULIPS

Until one has seen a good collection of these plants, he has no idea how much nature can do in the variation of one flower. All Mariposas are simply forms of *Calochortus venustus*, yet there are six well-marked strains, all with the slender grace of stem belonging to the species.

Cup-shaped flowers, one to many on a stem, wonderfully marked with eyes and dots and pencilings in rich colors, are characteristics. Yet each strain carries out the plan

on a color scheme of its own, and then can be compared only with the orchids in wonderful variability of beauty.

“*Mariposa*” is simply the Spanish word for butterfly, and is applied to these Tulips because the eyes and markings of the flowers are so much like those on a butterfly’s wings. It is a musical word given to a county and to a town in California, and we would hardly like to give it up for its English equivalent.

VENUSTUS Citrinus. A most satisfactory hardy species with deep rich yellow flowers with a black eye. Most excellent. 6 cts. each, 60 cts. per doz., \$4 per 100.

El Dorado. The plants of this strain grow from 1 to 2 feet high and branch. The flowers are simply marvelous in their variety of colors and markings. Scarcely two are alike; in a mixed lot they may vary through white, lilac to purple and again through shades of pink to deep claret-red. No plant subjected to the hybridizer’s arts shows wider or more beautiful variations. In any mixture whites, more or less eyed, predominate. There is no better investment for the flower-lover than a quantity of these bulbs. They thrive best in a rather porous soil, either sandy or gritty, and will grow either in sun or light shade. Flowers are 2 to 4 inches in diameter. Mixed colors, at 6 cts. each, 60 cts. per doz., \$4 per 100.

Oculatus, like *Citrinus*, but wonderfully varied in whites and creams, more or less tinted purple, and with very rich eyes. I have had the flowers 4 inches across. The plant is a good grower, and the flowers are most satisfactory. 6 cts. each, 60 cts. per doz., \$4 per 100.

Purpurascens resembles *Vesta* in habit. This is a superb strain with the fine growing qualities of *Vesta*, and with fine flowers lilac to purple, darker on the outside. 7 cts. each, 75 cts. per doz.

Vesta likes full sun and will grow best in heavy soils. It is a species of my own, found on heavy clay soils, is the best grower of all *Calochortus*, and will succeed in almost any ordinary soil. It is a most superb thing, with great 3- to 5-inch flowers, borne on long, separate stalks; very numerous. The color is white, flushed with lilac or rosy purple, red at center, and purple on backs of petals. I think this the best of all *Calochortus*. Reports from European growers put it in the first rank. The fine photograph on back cover does it no more than justice. I have very large bulbs at 10 cts. each, or \$1 per doz.; good bulbs at 7 cts. each, or 60 cts. per doz., and small bulbs to naturalize at \$3 per 100.

MARIPOSA TULIPS IN MIXTURE. A mixture of fine Mariposa Tulips for 50 cts. per doz., and \$3.50 per 100.

MARIPOSA TULIP COLLECTIONS. I put up a collection of four species, 25 bulbs each, one hundred in all, named, for \$4, and will supply a half collection for \$2.25.

Calochortus. All sorts. Mixed. 40 cts. per doz., \$3 for 100.

OTHER MARIPOSA TULIPS

There are on the Pacific Coast of North America, from British Columbia to far down in Old Mexico, a wonderful series of other Mariposa Tulips. They must be seen in order to realize the superb variations. At this time I can offer only the following fine species.

Greenii. This is a rare species of the same class as *Nitidus*. An erect cup of large size, soft lilac, yellow at inner base and lined with long silky hairs. Probably very hardy. 15 cts. each, \$1.50 per doz.

Howellii grows about 8 inches high, bearing large white flowers with green hairs on the lower, inner portion; a wonderfully beautiful flower. 15 cts. each, \$1.50 per doz.

Leichtlinii grows in the high Sierras and is usually not over 6 inches high, with smoky white flowers vividly marked with almost black. 7 cts. each, 70 cts. per doz.

Plummeræ is a wonderfully beautiful flower of a shade of lavender, with long, silky hairs covering the interior. A large sort with flowers up to 5 inches across. 15 cts. each, \$1.50 per doz.

Nitidus. A lovely species with large showy flowers, pale lilac with large indigo colored blotch. It is lined with many cobwebby hairs. 10 cts. each, \$1 per doz.

Macrocarpus is of the sage-brush regions of the Great Basin. The stem is stiff, with exquisite lavender flowers of large size, tinted green on the reverse. 12 cts. each, \$1.25 per doz.

CULTURE OF CALOCHORTUS IN CALIFORNIA

Let the bed be slightly raised, with the drainage perfect. A rise of 3 inches with a slight slope will assure this.

Soil. No fresh manure must be used, but any loam will do, although sandy loam best meets the needs of the greater number of species. Still, clay loam, gritty soil, or even adobe, if lightened with sand, grit, spent tanbark or leaf mold, will give good results. The most satisfactory results are obtained with a soil that is light and porous, not made too rich with fertilizers, and providing thorough drainage. These requirements can be secured very easily in almost any garden, and the results justify all efforts expended in securing proper conditions. If only a few dozen are grown, it is really better to plant them in a flat box, when 10 inches of soil is ample.

A customer living in the Piedmont region, east of San Francisco Bay, has had great success year after year in a soil patterned after that used in England. Here is the composition: 2 parts any loam, 1 part sand, 1 part the fine road grit, such as is used to dust over the oiled surface of roads for a finish. Mix well, and a depth of 10 inches is ample.

Other customers in the eastern bay region have had excellent success with no preparation of the prevailing loam.

Time to Plant. Plant as soon after October 1 as possible, and not later than January 1.

Depth to Plant. Two to 2½ inches is ample.

Distance Apart. They will thrive 2 inches apart each way.

Water. During our winter and early spring the rains are sufficient, but if the late spring is dry, keep the ground barely moist after April 1, and water liberally when the buds show for bloom.

Care of Bulbs After Flowering. If the bed can be left dry all summer, do not dig the bulbs, and they will come up again in the fall. They should not be watered during the summer, and if the bed is where watering is done, it is better to dig the bulbs and store them, without packing material, in paper bags, in any dry, cool place. One advantage of planting in a box is that the box can be put in a dry place and the bulbs left undisturbed. A box 2 x 3 feet will hold 50 to 75 bulbs.

Gophers. These troublesome rodents are very fond of *Calochortus* bulbs as well as of Tulips. If they cannot be poisoned or trapped, they can be kept out in several other ways. I have found that an underground fence made of 2-inch planks set 2 feet deep with an inch above the surface will keep them out. Another method is to make a fence of wire screening of three-fourths-inch diamond mesh underground. This can be had 2 or 3 feet wide. Still another good way is to make a large sunken box, with only the top of the sideboards showing above the ground; 10 inches is deep enough. Such a box can have a bottom of wire mesh or roofing tin.

Pot Culture. See page 14.

IN THE EASTERN UNITED STATES

Calochortus will endure the coldest weather in the Eastern United States, but suffer from premature thawing followed by freezing.

I think that the soil mentioned above, using one-third grit, would be the very best for the Eastern United States.

(1) **In Open Ground.** Miss U., living along the Hudson River, has been successful every year with many varieties. She writes:

"I have again had splendid success with my Californian bulbs, and have flowered every one. I planted them the first of November in rather sandy soil. The bed is well drained and in quite a sheltered spot. It gets the full sun until about three o'clock in the afternoon. Before the ground freezes hard, I give it 3 or 4 inches of dried leaves. These are removed in the spring when all danger of heavy frost is over.



MARIPOSA OR BUTTERFLY TULIPS

Lower left-hand flower with crimson blotch, the two purplish ones and the top flowers are all forms of El Dorado Strain. The golden one is Citrinus. Vesta is at left of Citrinus and Oculatus is at the right side. Drooping one at bottom is Amabilis, a Globe Tulip

"I have found it a good plan to have a few leaves around the shoots for a while and to keep some extra leaves at hand at night when the frost threatens. In this way, I have succeeded delightfully with the *Venustus* varieties and the *Globe Tulips*. My bed of *Erythroniums* was a perfect success. The *Globe Tulips* always give a good account of themselves."

(2) **In Coldframes.** With any ordinary care, all *Calochortus* can be grown splendidly in coldframes. They should be treated exactly as for open beds, except the soil will be better with some leaf mold. Do not coddle, but simply protect from freezing and thawing. After ripening, keep the sashes on all summer so that they will stay dry. I have glowing reports from customers who have grown them this way.

(3) **In Pots.** While they cannot be forced much, they can be grown in pots fairly well as follows: Use a sandy or loamy soil with good drainage. Plant 1½ to 2 inches apart, which will give six to twelve to a 6-inch pot. Moisten the soil and put the pot in a dark place, a cellar preferred, for about six weeks, to let them root. Then bring into a warm, sunny place and water moderately. After flowering, let them ripen well and then dry off and leave perfectly dry until fall.

FRITILLARIAS

Fritillarias are bulbous plants of the woodlands. The stems are leafy and most graceful, with many pendent bell-like flowers. One species found in Southern California is called "*Mission Bells*" while in other places local species are called *Red Bells*, *Yellow Bells*, or *Brown or Chocolate Lilies*, a name quite justifiable, as *Fritillarias* so closely approach true lilies in character that some species have been confused with them.

There are three groups of these fine plants on the Pacific Coast.

1st Group. These have slender stems with the leaves in circles very much like many lilies. Many flowers are bell-shaped and nodding, borne in graceful racemes. The bulbs are round, flat disks covered with ricelike grains. These grains are little offsets and will grow if planted. When a bulb is dug they usually fall off and replant the bed.

Recurva is often called "*Red Bell*" and *Lanceolata* is often called "*Mission Bells*." The name "*Mission Bells*," however, rightly belongs to *biflora*, a species related to group 2.

These species are woodland plants, perfectly hardy and like a porous well-drained soil fairly rich in leaf mold.

Lanceolata is from 1½ to 3 feet high, with few to many flowers. They are green and brown, mottled prettily. Good bulbs, 10 cts. each, \$1 per doz.

Lanceolata gracilis has narrow black-purple flowers, quite pretty. Same price as *lanceolata*.

Parviflora is a little like *lanceolata* with small pendent purplish bells. Foliage attractive. 10 cts. each, \$1 per doz.

Recurva much resembles a lily. In size and habit like *lanceolata* with orange-scarlet flowers. Same price as *lanceolata*.



Fritillaria recurva.
The finest of the
world's *Fritil-*
larias; orange and
scarlet

2d Group. In these there is a bulb composed of large separable scales more like lily bulbs. The stems are often less than 10 inches high with from 2 to 6 flowers which are broad bells. They like a good heavy loam, and sun.

Agrestis is a low-growing species with neat, greenish-yellow flowers.

Glaucia is related to **Pluriflora**, grows to about 10 inches with broad greenish-white bells. Quite odd and new. 10 cts. each, \$1 per doz.

Pluriflora grows from 6 to 12 inches in height, leafy at base with large open bells of a reddish purple. Handsome. 10 cts. each, \$1 per doz.

Purdyi is a new and very handsome species with from a few to 12 flowers in broad bells. The color is white, tinted pink and flecked scarlet. Very large fine bulbs at 15 cts. each, \$1.50 per doz.

3d Group. There is but one species of these, **pudica**. It has few rather large leaves at the base and from three to six clear golden, nodding bells. A really beautiful, perfectly hardy little bulb, which does best in sun in a loose or sandy soil. 10 cts. each, \$1 per doz.

Very Large Bulbs of any of These at Double Price

Fritillarias have an odd habit of having two entirely different sorts of leaves. If they do not flower they have a single, very large leaf; if they do, they do not have this leaf at all, but circles of leaves around the flowering stem. They are not steady bloomers, but are apt to rest the year after flowering. It is my endeavor to send only flowering bulbs, but there is no way in which I can be sure to do so.

The Indians found valuable foods in many of the bulbs in this list. Most valuable of all were the **Camassias** which were used by all tribes and grew in such numbers as to almost constitute their starchy food.

All of the **Calochortus** and **Brodiaeas** were prized although more as a delicacy than a staple. I well remember that an Indian woman was thoroughly enjoying my **Calochortus amabilis** until I happened to note the fact and very pointedly objected.



Dog's-Tooth Violets of the Revolutum type are strong-growing, with longer, stiffer stems than the other sorts. The type is white, with purplish tints often changing to purple. Pink Beauty is a soft lilac-pink and exquisite, while Johnsonii is the soft rose-colored form. Very distinct from any other Erythroniums



The delicate tints of *Erythronium* make them one of the most charming plants in a garden. The varieties here illustrated are: *Giganteum*, *Grandiflorum robustum*, *Citrinum*, *Hendersonii*, *Rebolutum*, *Pink Beauty*, *Californicum*, *White Beauty*, *Johnsonii*

DOG'S-TOOTH VIOLETS

(*Erythroniums*)

Our Front Cover Page is of a garden in Portland, Ore., which won much admiration. It belongs to Mr. O. M. Ash of Portland. The star feature in this garden was Dog's-Tooth Violets which I had supplied. They will be seen in the center near the brook.

This picture admirably shows the conditions best for these lovely flowers.

First, shade of deciduous trees; second, moderate moisture.

Mr. Ash prepared his soil as follows:

The naturally loamy clay was mixed with concrete sand and leaf mold in about equal proportions, and to the depth of one foot. The bulbs were planted 6 inches deep (base of bulb). Every fall the top surface is given a dressing of leaf mold scratched in.

The charm of these most beautiful woodland plants is well pictured in color plate. If they had no other beauty than that of their richly mottled leaves, they would be well worth a place in the shady corner. Their flowers are indeed very fine, and, in the Western species, often 3 inches across, with stems at the most 18 inches high, although oftener from 3 to 6 inches. The colors run in delicate tints of white, pink, cream, bright yellow and even rose. They are hardy in the coldest parts of the United States, and while they are at their best in a loose, gritty soil, rich in leaf mold, they also thrive in the greatest variety of clays, grits, and rocky soils. In woodlands, in shaded corners, or in the crevices of rockwork in shade, is the place to naturalize them; they should carpet the ground.

Culture. I keep the bulbs in a cool place and in barely moist soil. When you receive them, plant at once in moist soil. When the bulbs are out of the ground, they soon suffer from overdrying. Any loamy or gritty soil will do and light shade is preferable. In planting, set the bulb upright, with 2 to 3 inches of soil covering the tip—2 inches apart will give room enough.

Dog's-Tooth Violets can be grown in pots or coldframes to good advantage. For potting, *Hartweggii* is best. Customers of mine in Michigan, Minnesota, Massachusetts, Ohio, and Delaware, as well as at Pacific Coast points, have had great pleasure from colonies of my *Erythroniums* planted in woods or other lightly shaded locations.

For naturalizing, the bulbs offered on page 19 are excellent. Seventy per cent of them will flower the first year.

Endless letters from pleased customers tell of success with *Erythroniums* from Montreal to Washington, D. C., and from Maine to Minnesota. That they are perfectly hardy, thrive with no special care, and stay for years is certain, and especially in all of the country north of California and east of the Rockies. Endless letters from customers tell of success with these lovely flowers throughout the northern United States from Oregon and Washington to Maine and as far north as Minnesota and Montreal. Great success is reported on Long Island, about Baltimore, and at many other points.

All of the Eastern species exhaust themselves by the production of endless offsets, which fairly fill the ground, while there are comparatively few flowering stems in a colony. The Western species, with one exception, have no offsets, but reproduce from seeds only, and a very large percentage of the bulbs flower the first and every year. Often there is a 100 per cent bloom. Even small bulbs flower.

Hartweggii has offsets, but still flowers every year.

Delivery September to December 1. All bulbs are packed against a journey of two months. Plant at once upon receipt in soil that is at least barely moist. If any delay, store in a cool place.

Californicum has large cream-colored flowers. Leaves richly mottled. Easy to grow, and a large colony is a beautiful sight. Large bulbs, 5 cts. each, 50 cts. per doz., \$3.50 per 100; smaller bulbs cheaper.

Citrinum is rather more erect in habit, with flowers almost pure white with strongly contrasting deep citron on lower third. One of the loveliest of all. 5 cts. each, 50 cts. per doz.

Grandiflorum robustum is a superb species with flowers of the brightest buttercup yellow. The leaves have no mottling—just plain green. It always attracts attention. 6 cts. each, 60 cts. per doz, \$4 per 100.

Hartweggii is as pretty as **Californicum**, with more yellow in the flower, and each flower on a separate stalk. Very early and stands much heat. Good for pots. Large bulbs, 5 cts. each, 50 cts. per doz., \$3.50 per 100; smaller bulbs cheaper.

Hendersonii. Like *Californicum*, but the flowers are a lovely light purple, with centers a deep maroon, almost black. Most striking. 5 cts. each, 50 cts. per doz., \$3.50 per 100.

Hendersonii, Gold-banded, differs in having a gold band below the purple color at center. 8 cts. each, 75 cts. doz., \$6 per 100.

Howellii is related to **Citrinum**, creamy with a yellow tint, but soon turns pinkish. 6 cts. each, 60 cts. per doz., \$4.50 per 100.

Purdyi has flowers borne like **Hartweggii**, but cream colored, with a very delicate light lemon center. 10 cts. each, 75 cts. per doz., \$5 per 100.

Purpurascens, of the mid-Sierras in California, has smaller flowers than the preceding, which are yellowish, tinted purple. 6 cts. each, 60 cts. per doz., \$5 per 100.

REVOLUTUM, DOG'S-TOOTH VIOLETS

The stems are long, the flowers large and exquisitely tinted, often single, never more than four to the stem, and the leaves are mottled in white and green. While the plants thrive in garden loam, they do well in heavy soils which are quite wet in winter.

REVOLUTUM. The type is a very fine species with large flowers which, on opening, are white, tinted lilac and may become purplish. The stems are very stout, sometimes 18 inches high, and one- to four-flowered. It will thrive on soil wet in winter. 10 cts. each, \$1 per doz. \$7.50 per 100.

Cream is a fine cream color. 10 cts. each, \$1 per doz.

Pink Beauty is like type, but a soft pink with an occasional white. Very lovely wild type from Northwestern California. 12 cts. each, \$1 per doz.

Johnsonii is perhaps the most lovely of all **Erythroniums**. With the stout habit of this group, it has exquisite rose-pink flowers. From the coastal region of Oregon. 10 cts. each, \$1 per doz., \$7.50 per 100.

Purdy's White is a pure white, rather than a lavender white. It is very richly marked at the base and has an unusually stout stem and large bold flower. An Eastern *Erythronium* lover writes that it was the most admired of all in her collection. 12 cts. each, \$1 per doz.

Praecox is an early blooming unusually fine variety. The leaves are mottled in browns, the flowers large and of a very fine rich-cream color, richly banded maroon. One of the finest of all. 10 cts. each, \$1 per doz., \$7.50 per 100.

Watsonii is also known as **Giganteum**, but is hardly of this class. It has white flowers, beautifully zoned at base with brown. 5 cts. each, 50 cts. per doz., \$3.50 per 100.

Flowering Season of Erythroniums: All are among the earliest flowers. *Hartweggii* is notably early, the *Revolutum* group latest. The entire season is over a month, which is here from February to April 15. In the East I would say from April 1 on.

MIXTURES AND COLLECTIONS OF ERYTHRONIUMS

A Fine Mixture from those of the first group will be supplied at 40 cts. per doz., \$3 per 100, \$25 per 1000.

A Fine Mixture of the *Revolutum* group will be sent at \$1 per doz., \$7.50 per 100.

A Splendid Collection of 20 bulbs each of five species (100 bulbs), named, for \$3.50, or a half collection (50 bulbs) for \$2.

Forms of **Erythronium revolutum** are not often used by me in collections.

Collections and mixtures are made from excellent bulbs.

NAMED ERYTHRONIUMS FOR NATURALIZATION

We offer a smaller size of **Erythroniums** for naturalizing. Experience in our garden shows that up to 70 per cent will flower the first year. Unusual value.

	100	1000	5000
Californicum . Cream	\$1.50	\$10.00	\$37.50
Citrinum . Cream and lemon.....	2.00	15.00	62.50
Grandiflorum Robustum . Buttereup-yellow.....	3.00	20.00	80.00
Hendersonii . Lavender	2.00	15.00	62.50
Johnsonii . Rose-pink	6.00		

A little money spent on Wild Flower Seeds and a very little care will make beauty spots of your odd corners. (See page 3.)



Lilium Humboldtii. One of the grandest of the world's Lilies. The type: orange spotted maroon. The easily grown variety *Magnificum* is the same, richly eyed with scarlet

CALIFORNIA LILIES

In number and beauty of its Lilies, California ranks next to Japan.

LILIUM HUMBOLDTII AND ALLIED SPECIES

HUMBOLDTII. A grand Lily, growing as tall as 10 feet, but usually 4 to 5 feet high, with very stout stem and many large orange-red flowers, spotted with small maroon spots. This species does well in the adobe soils prevailing about San Francisco Bay. Immense bulbs, 50 cts. each, \$5 per doz.; fine bulbs, 40 cts. each, \$4 per doz.

Magnificum. A grand species differing from preceding in having darker foliage, and in the spots on the flowers, each surrounded by a circle of crimson. Splendid growing and flowering qualities. It is sure to flower the first year after planting, and is a splendid grower. None better. First size, 50 cts. each, \$5 per doz.; fine bulbs, 40 cts. each, \$4 per doz.

BLOOMERIANUM. Like the preceding in color and flowering qualities, but with a very small bulb and small stem. Very pretty. 40 cts. each, \$4 per doz.

BOLANDERI. One of the rarest of Lilies; 1 to 3 feet high, slender, with bell-shaped, deep crimson-red flowers, dotted purple. 50 cts. each, \$5 per doz.

COLUMBIANUM. Like a miniature *Humboldtii*. Bright golden yellow, spotted maroon, 2½ to 3 feet. Good, 30 cts. each, \$3 per doz.; very large, 40 cts. each, \$4 per doz.

LILIUM WASHINGTONIANUM AND NEAR SPECIES

WASHINGTONIANUM Purpureum. The fine halftone on page 21 shows the flowers to perfection as to form. They are from white to a rich wine-color, and change after opening; often 6 to 7 feet high, with a stout stem and many leaves, and as many as twenty-five very fragrant flowers. The bulbs are easily handled, but will not give a good bloom the first year. Large bulbs, 8 to 9 inches in circumference, 50 cts. each, \$5 per doz.; small, 40 cts. each, \$4 per doz.

Washingtonian Minor is the true *Shasta Lily*. With a small bulb and a slender stem 3 to 4 feet high, it has pure white flowers faintly flecked purple and most fragrant. A delightful Lily greatly admired by tourists who see it in its native haunt. Large bulbs, 50 cts. each, \$5 per doz. Good bulbs at 40 cts. each, \$4 per doz.

RUBESCENS (The Redwood or Chemise Lily). A beautiful and very distinct kind, having tall, slender stalks and exquisitely fragrant flowers of a tubular shape. In opening, they are white dotted purple, but soon change to deeper purple, and all colors between white and purple will be seen on one stem. To succeed with this, drainage must be perfect. 40 cts. each, \$4 per doz.; very large, 50 cts. each, \$5 per doz.

KELLOGGII. Three to four feet high with a slender stem and from three to fifteen flowers with pink, revolute petals. Very fragrant. Fine bulbs, each \$1. Good bulbs at 75 cts. each, \$7.50 per doz.

CULTURE OF GROUP I

The Lilies of the *Humboldtii* and the *Washingtonianum* groups are natives of cool slopes in mountainous regions, where they grow in forests, or where protected by a growth of shrubs. The soil is deep, perfectly drained, composed of clay or a rich loam, mixed with leaf soil and the debris from broken-down rocks. In cultivating these Lilies, we should take lessons from Nature.

Situation of the Lily-bed. They should be planted where they are protected from cold winds and where the soil is not dried out by the direct heat of the sun. On large grounds the ideal location is a glade in the woods. The partial shade of deciduous trees, the shelter of rhododendrons or bamboos, or similar shrubs, or of tall-growing perennial plants, may give conditions quite suited to their culture. A protected nook on the shady side of the house is best on small grounds, and ferns are congenial neighbors.

Drainage. This must be perfect. If the ground is heavy and clammy, under-drainage should be given, and the soil made lighter and looser by the addition of humus.



Washington Lily, *Lilium Washingtonianum Purpureum*. A grand Lily, opening white and gradually turning purple

Soil. This should be a fairly good loam, mixed with humus and sand. New manures are always to be avoided with Lilies.

Planting. They should be planted so that the top of the bulb is not less than 4 inches from the surface; about each bulb put a layer of an inch or so of sand which will carry away excessive moisture and prevent fungus attacks.

Watering. Lilies should not be kept water-soaked, but should have a moist surface during the growing season. Keep rather dry after they have flowered.

Never move a Lily bulb unless absolutely necessary.

My very best success with Lilies of this group has been in a very loose, gravelly soil, rich with leaf mold, and with water running above and percolating under the roots.

LEOPARD BOG LILIES

Parviflorum (*Pardalinum* var. *minor*) is a very pretty, slender species growing to as much as 6 feet with many blossoms.

The petals are revolute like *Pardalinum*, yellow, finely dotted maroon at center, crimson on upper half. Quite fragrant. This is the Tiger Lily of the Mt. Shasta region. Large bulbs, 50 cts. each, \$5 per doz. Good bulbs, 40 cts. each, \$4 per doz.

PARREYI. This is one of the world's finest species. The slender, leafy stem is from 3 to 5 feet high and bears from a few to 25 long, trumpet-shaped, lemon-yellow, sweetly fragrant flowers. In some forms, the center is faintly dotted brown; in others solid. I can only offer three-year-old seedlings, some of which flowered this summer. These at 50 cts. each, \$5 per doz.

ROEZLII. Stem slender, leaves crowded, very long and slender; the closely revolute perianth is a clear reddish orange, dotted maroon. Needs to be well massed to get its best effect. As it grows quite tall, it can be planted in low places. A rare Lily; long lost, but reintroduced by myself. 50 cts. each, \$5 per doz.

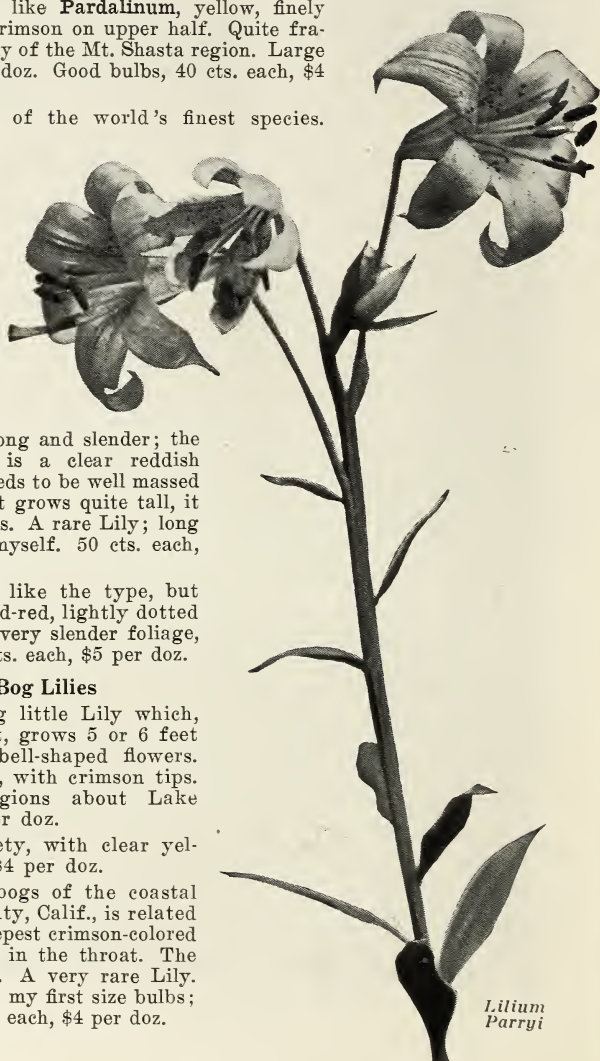
Crimson Form. This is like the type, but the flowers are a deep blood-red, lightly dotted maroon. With its long and very slender foliage, *Roetzlii* is always fine. 50 cts. each, \$5 per doz.

Small-flowered Bog Lilies

PARVUM. A charming little Lily which, under favorable treatment, grows 5 or 6 feet high, with many small, bell-shaped flowers. It is orange at the center, with crimson tips. From the sub-alpine regions about Lake Tahoe. 40 cts. each, \$4 per doz.

Luteum. A taller variety, with clear yellow flowers, 40 cts. each, \$4 per doz.

MARITIMUM, of the bogs of the coastal portion of Mendocino County, Calif., is related to *Parvum*, but with the deepest crimson-colored flowers only lightly dotted in the throat. The foliage, too, is deep green. A very rare Lily. 50 cts. each, \$5 per doz. for my first size bulbs; I have good bulbs at 40 cts. each, \$4 per doz.



PARDALINUM. This is one of the best Lilies for the garden. It grows well in any loam or gravelly soil, in sand, or lighter clays, so long as given some shade and water. The stout stems are very leafy and from 3 to 6 feet high, and the many large and very showy flowers are richly colored with orange centers and crimson tips, with many spots in the central section. No Lily is more likely to give satisfaction in the garden. This is the Tiger Lily of the coast range canyons in California. Good, 25 cts. each, \$2.50 per doz.; large, 35 cts. each, \$3.50 per doz.



Forms of the Leopard Lily, the best of all Garden Lilies. It thrives in any good garden soil, and will hold its own for many years. A most showy Lily; 3 to 8 feet high

CULTURE OF GROUP II

The second group into which I would divide California Lilies as to culture comprises all of the so-called Bog Lilies. The *Pardalinum* and *Parvum* groups are so classed.

These Lilies grow naturally along the banks of small, living streams, on the borders of lakes and ponds, in deep, alpine meadows, on the borders of or on raised hummocks in bogs. Their bulbs are not so deep as the others, and they are more dependent upon surface moisture. The soil in such places as I have mentioned is always rich in rotten leaves, and usually sandy; sometimes it is peat or pure humus. Low shrubs or tall plants protect surface from heat.

Drainage. The fact that they like moisture does not mean that they like a water-soaked soil. Many failures with Bog Lilies are due to this error. If the roots can go down to moisture, all the better, but don't put the bulb in wet, gummy soil.

Soil. A light, sandy loam, mixed with leaf mold or peat, is the best possible.

Situation. My description of the natural habitat will suggest the best location where large and varied grounds give a choice. On the margin of a pond or brook, planted a foot or so above the water-level in moist, meadow-like expanses in sheltered places, or damp openings in woods are ideal locations. In small grounds, a hydrant can be so arranged as to give a constant drip; the fern corner is good, and the rhododendron bed is perfectly adapted.

OTHER SPECIES THAN WEST AMERICAN LILIES

I think that in the State of Washington the best conditions exist of all the world for growing Lily bulbs to perfection.



Lilium Philippinense

Foreseeing this, I made my arrangements to have stocks of a number of Lilies grown there for me. The crops of some of these now begin to be available and I can assure the buyer that the quality is super-fine and that the bulbs are perfectly clean.

Each year I will be able to add other Washington-grown bulbs to this list.

LILIUM Brownii Colchesteri. This is a very fine Japanese Lily little known in American gardens. The stems are 2 to 4 feet high and quite leafy. There are from one to seven large flowers opening wide, rather like those of the Madonna Lily. The petals are about five inches long, making the open flower 5 to 7 inches across. Color white, tinted brown on the back and with lemon-yellow center and very fragrant. Give first-class drainage and a rather loose loamy soil in cool situation in sun or afternoon shade. \$1.25 each, \$12.50 per doz.

Candidum is the **St. Joseph's Lily** or **Madonna Lily**, one of the most loved of all Lilies. It grows from 2 to 4 feet in height with from 3 to 20 pure-white flowers, which are very fragrant. The flower gradually spreads from the center, and is large and showy. Any good garden soil in sun. Large, superfine, clean bulbs at 35 cts. each, \$3.50 per doz.

Davuricum has large open cups which stand straight up at the top of a 2 to 3 foot stem. The flowers are orange-red spotted with purplish-black and very showy. Quite easy in any sunny position. 30 cts. each, \$3 per doz.

Philippinense is a very lovely Lily, and I have bulbs collected for me each year in the high country of Luzon. The bulbs arrive in January or February, and can be planted until May. 18 inches to 3 feet, many slender grass-like leaves and a very long, slender, pure white trumpet flower with a most exquisite fragrance. Here in California this fine Lily does well in a filtered shade in ordinary loam, either rich with leaf mold or ordinary. Plenty of moisture while it is growing is essential. Quite hardy, and one Lily that can be planted best in spring. 60 cts. each, 3 for \$1.50, \$5 per doz.

Regale is one of the finest Lilies for garden use the world affords. Large blooms from stems 1 to 3 feet high. Large trumpet-shaped flowers slightly shaded pink on white ground and with primrose-yellow showing through from the lower side. Very fragrant. In almost any good garden soil results can be had. Here afternoon shade is an advantage, also a light mulch to hold moisture even. Heavy bulbs, 7-inch circumference or over, at 35 cts. each, \$3.50 per doz. Strong young bulbs, 4 in. or more around, at 20 cts. each, \$2 per doz. Many will flower the first year.

Lilium Superbum, the **Turk's-Cap Lily** of the Eastern United States, is rather like **Pardalinum**. A stout stem 4 to 6 feet high with many handsome leaves and few to many large bold upstanding flowers bright orange with red tips and greenish center. See *Pardalinum* for culture. Super fine bulbs at 30 cts. each, \$3 per doz. Good bulbs at 25 cts. each, \$2.50 per doz.

Tigrinum is the real **Tiger Lily** of old-fashioned gardens, which has a leafy stem 3 or 4 feet high with large bright orange-red flowers dotted brown. Fine small bulbs 20 cts. each, \$2 per doz.

TRILLIUMS

Trilliums are very attractive plants of the Lily family. The forms known as Wood Lilies or Wake-Robins are well known in the East and are fine woodland plants. Of these, the best is *grandiflorum*, to be had from most Eastern dealers. In the forms of *sessile*, we have an altogether different tribe and a much better one from the standpoint of easy culture and ability to hold their own for years in the garden. There is a colony of *Trilliums* at Ukiah which, with no care, has increased in beauty for at least fifteen years, and I have seen many such.

Soils Preferred and Characteristics

A better plant for the shaded corner, damp woodland, border of streams where the soil is moist, or for the shaded parts of the garden, does not grow. It takes a year for them to take hold, but they will then improve for years. There is no better bulbous plant to naturalize, and I have them in perfection in gravel, loam, sand, and heavy clay, and in each case, with no care whatever, and with our dry California summer.

SESSILE Californicum. A strong plant a foot high, with the separate leaves 5½ inches long, by 4½ inches wide, and the petals 3½ inches long. Flowers pure white. Very fragrant. Forms masses of many individuals. See beautiful cut on page 26.

Rubrum. Narrow petals; deep maroon-purple to reddish purple.

Snow Queen is a pure white form of *sessile*, having broader petals and larger flowers. Easily the best of the *Trilliums*.

OVATUM. Nearly related to the Eastern *grandiflorum* but larger. Flowers open pure white, gradually tinge pink, and finally become deep wine-purple. Requires leaf mold and shade. For the redwood regions the best to naturalize. None of the *Trilliums* are finer than *ovatum*; the change in color is an added charm. Fine bulbs, 7 cts. each, 70 cts. per doz.; \$5.50 per 100. Very large bulbs, 12 cts. each, \$1.25 per doz., \$9 per 100.



Trillium sessile increases and becomes more valuable year by year

PURDY'S BEST. This is a new form of superior merit. Other forms of *sessile* have rather narrow petals while this has broad, ovate petals. The color is creamy white with a deeper cream at center. 15 cts. each, \$1.50 per doz, \$10 per 100.

RIVALE. A most dainty little sort from Southwestern Oregon and very rare. The delicate mauve flowers are borne on separate stems, and the plants at most are 6 inches high. 10 cts. each, \$1 per doz.

ZYGADENUS Fremontii. Is related to *Camassias* and has broad linear leaves at the base and a bare stem 12 to 18 inches high, with very many good-sized bright yellow flowers about an inch across, of real beauty. This species likes any good loam but does best in a heavy soil. It is well worth while, perfectly hardy anywhere. 10 cts. each, \$1 per doz.

WESTERN LADY'S-SLIPPERS (*Cypripediums*)

In the Far West we have three true *Lady's-Slippers*, and *Calypso borealis* and *Epipactis gigantea* so closely related that they are popularly taken for *Lady's-Slippers*.

Culture. The usual soil is a fairly well-drained woodland soil, either clayey, sandy, or gritty, with moderate admixture of leaf mold, always sheltered, shady and moist.

CALIFORNICUM is a true bog plant, found only in nature in wet bogs of the Northern mountains, or in the streams issuing from such bogs, and having a rather sandy peat soil. It makes strong clumps, with stout leafy stems 18 inches to 2½ feet high, with rather small (proportionately) yellow flowers. Strong roots (divisions) 50 cts. each, \$5 per doz.; clumps, undivided, at 15 cts. the eye.

MONTANUM is a most lovely Orchid, found in the forest region from Sonoma County, Calif., northerly. It is not unlike the Eastern *pubescens* in habit. The large flowers have white sacs and brownish sepals. Very fragrant, with the odor of vanilla. Extra strong plants, 50 cts. each, \$4 per doz.; good plants, 40 cts. each, \$3 per doz.

FASCICULATUM is a low-growing sort, with much the same habits as the preceding, but the flowers are brownish. Quite interesting. This variety is offered at the same prices as *Montanum*.

CALYPSO BOREALIS is an exquisite little Orchid often taken for a Lady's-Slipper. It is almost always found either in mold and moss on rotted logs or in like soil on the ground in shaded woods. It does not root in the ground; the root is a little white bulb. It is not difficult to flower the first year. 20 cts. each, \$2 per doz.

EPIPACTIS GIGANTEA is a strong-growing Orchid which spreads by underground runners to form large, close masses. It loves a silty loam near water, and its many racemes of brownish Lady's-Slippers are quite ornamental. Culture is not at all difficult. 20 cts. each, \$2 per doz.

I have not heretofore listed Lady's-Slippers at retail, although I have for many years supplied them for export trade. No one can say that the culture of these Orchids is easy. I would not advise anyone who is not willing to take pains with them to buy.

I can and have naturalized *montanum* most successfully under conditions not at all exceptional. *Fasciculatum*, also *californicum*, is not easy with me. *Epipactis gigantea* is very easy, and *Calypso borealis* is easy the first year if planted in mold and moss in a very sheltered place.

LARKSPURS or DELPHINIUMS

The Western species of these, with the exception of *scopulorum*, have dry ripened roots very much like *ranunculus* and can be handled as bulbs.

They make growth after planting in fall and winter, and after flowering ripen into a dry root which can be kept indefinitely. There are very many species of which I offer the following.

DELPHINIUM californicum grows from 1 to 2 feet in height, with a single, erect and many-flowered stem and many dark blue flowers. 10 cts. each, \$1 per doz.

Cardinale is the Giant Scarlet Larkspur of Southern California. It often grows from 3 to 4 feet high, and it has been seen over 8 feet high. The scarlet-orange flowers are very showy. 25 cts. each, \$2.50 per doz.

Nudicaule is like the preceding but with much prettier foliage and only from 1 to 2 feet in height. A most delightful plant. 20 cts. each, \$2 per doz.

Variegatum is low—say 8 to 15 inches—with very dark blue flowers of great beauty. 10 cts. each, \$1 per doz.

Dry bulbs in fall—living plants in spring. If received dry, wet them and be convinced that they are full of life. An English firm sent back some bulbs of this nature and after the long trip they flowered here. *Soil*, any loam, a gritty soil best. *Pl.*, preferably dry in early autumn. *Depth*, cover about 2 inches. *Sit.*, light shade or sun.

LEWISIAS

CULTURE OF LEWISIAS

All **Lewisias** are perfectly hardy according to reliable reports. Reports from Montreal agree with reports from Boston.

All **Lewisias** must have a loose, porous soil with a moderate amount of humus or leaf mold. It must be deep, at least a foot, and drainage must be excellent. They like a gritty soil and one of the best things to mix is the fine screenings from crushed rock, the sort of fine rock that is used for the last dressing on asphalt roads. One-third of the bulk of this will make a soil that they like.

All of a group of small deciduous species of which *Rediviva* and *oppositifolia* are examples, are better in full sun. Some of them grow in soil that is decidedly wet when they are in growth.

DECIDUOUS LEWISIAS

Nevadensis is another little clustered species with white flowers which grows in quite moist soils best. 15 cts. each, \$1.50 per doz.

Oppositifolia has spatulate leaves and a very pretty starry white flower. A few inches high. 15 cts. each, \$1.50 per doz.

*Lewisia Howellii*

Rediviva, also deciduous, is a small plant with large, satiny pink flowers of great beauty. 15 cts. each, \$1.50 per doz. **Lewisia rediviva** takes full sun.

Rediviva has proved perfectly hardy in the Northern States. A customer writing from Vancouver, B. C., says that all *Lewisias* are hardy there as far as freezing is concerned, but suffer from excessive moisture. He gives a cover to shed rain.

They have proved hardy on rockwork in Northern Scotland.

I would expect all to be hardy in the Northern States if thoroughly drained in very light shades.

EVERGREEN LEWISIAS

All of the Evergreen varieties including *Howellii*, *Cotyledon*, *Finchii*, *Leeana* and *Tweedii* like some shade. The gentleman who grew the fine *Lewisia Tweedii* that the picture is taken from said that he had his plants on the cool northern and shady exposure. Here in beds under rather open black oaks they thrive; but a bed that is rather densely shaded until about two p. m., with some sun after that time, is still better. It is not a good plan to cover with leaves in winter as there is danger of rotting their dense rosettes of evergreen leaves.

Plant fall till spring, but I believe that early spring is the best time and they handle easily then.

In regions where the summer is cooler, a cool, sunny position might be as good, and in rockwork, a situation where there is shade from a rock or a shrub will answer.

But the soil must be deep and loose. I do not know whether they are lime-lovers or not, but in my garden where the water which I use is quite limy, they thrive.

Columbianum has a rosette of short leaves and rosy flowers with dark lines down the midrib. 25 cts. each, \$2.50 per doz.

Cotyledon, with long and more slender leaves and flowers similar to **Columbianum**. 25 cts. each, \$2.50 per doz.

Finchii is next to **Tweedii**, the largest and finest of the group. The broad bright green leaves are $1\frac{1}{2}$ inches wide by 3 inches or more long and make a close rosette flat on the ground. Four or five slender scapes, 8 to 12 inches high, each bear from 20 to 30 very handsome soft pink flowers margined with a broad white margin. A good plant in flower is a solid bouquet. A most lovely plant. 40 cts. each, \$4 per doz. for fine plants.

Howellii, with beautifully crested leaves and similar flowers. Same price.

Leeana, with slender, pinelike leaves and many smaller magenta flowers. It forms many-headed clusters. Same price.

Tweedii. When I first sent this plant to Europe thirty years ago, it was spoken of by England's highest authority as the finest acquisition to the garden in a lifetime.

It can now be said that there is no more lovely rock plant in the world. Like all of the *Lewisias*, it has its leaves in a broad rosette at the top of a thick rootstock. But it may in time have two, three, or four such rosettes.

The single rosettes of a strong plant would be close to a foot across. The flowers come on slender, erect stems from between the leaves and are carried well above the heavy foliage.

The flowering stems bear from one to three flowers each, nearly two inches across, and the plant, of which I produce a picture and which was grown in a garden in the State of Washington, had twenty-one blossoms on at one time and sixty in all; while a wild plant reported to me had at one time three-hundred open flowers. I should like to have seen it.

The color is an exquisite salmon-pink.

Give it a deep soil with abundance of grit in it and leaf mold, and let it be deep, as it has a deep root.

Very fine plants at \$1.25 each. Good plants, but smaller, 75 cts. each.

This year brought two new species as yet unnamed and two years ago the superb sort now listed as *Finchii*.

Lewisia, new species. With pretty rosettes like **Columbianum** it has many small white flowers in a fleecy panicle. 30 cts. each, \$3 per doz.

New Species No. 2 has a most delightful trim little rosette of spatulate leaves and rosy flowers just like those of *Leeana*. Quite long flowering. 40 cts. each, \$4 per doz.



Lewisia Tweedii



Calochortus Vesta. An exquisite Mariposa Tulip, with long stems for cutting; white, lilac or rose